VISUAL POTENTIAL AND ITS USE IN GERIATRIC MENTAL HOSPITAL PATIENTS

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Seeing guides our responses through most of our waking hours. Clear vision is not indispensable to efficient functioning, but it is a characteristic of the normally fortunate as contrasted with the handicapped. As eyes age, normal physiologic alterations produce changes in the limits of natural clear vision. The range of accommodation, which makes possible the adjustment of focusing of the eyes for different distances, decreases fairly regularly from earliest childhood until it is completely lost in old age. This association of visual changes with aging is recognized by the term "presbyopia"—a word signifying "old eyes." The presence of presbyopia indicates the need for bifocals, or at least glasses for close work, as so frequently happens in the forties. Some older people reject such assistance and assert that they see very well without ocular correction. Their criterion of satisfactory vision is a subjective one. Measurement of visual acuity in such patients may reveal limitations (often correctable by glasses) which completely alter previous conclusions concerning their visual status and their potential visual efficiency.

PLAN OF STUDY

This paper presents an assessment of the visual capacities and attitudes toward correction in a selected population of older subjects. It is one aspect of a major study[1] in which a group of geriatric patients recently committed for the first time to a mental hospital were divided by random sampling into control and experimental groups. Patients in the control group were subjected to the usual hospital routine, while the experimental group was housed in a special ward where a variety of social roles are made available, including those of paid worker in a sheltered workshop, creator in special crafts, householder, ward citizen, and participant in ordinary social activities. Other papers will present various facets of the total project. This report deals only with the investigation of the extent to which these people appeared to be visually handicapped and their indicated measure of interest in the possibility of utilizing their visual potentialities more fully. Data presented here demonstrate that many of our older people in a hospital for the mentally ill are suffering from easily correctable visual handicaps. Other authors (1) indicate that this is not a peculiarity of the mentally ill but may be a fairly common limitation on the efficiency of the aged in general.

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Visual changes with aging

The normal processes of change in visual functioning (2, 3) justify the general impression that in a geriatric population optimal vision requires the use of corrective glasses—for distant or near vision, or both, depending upon the appraisal of a particular individual as farsighted, nearsighted or emmetropic. A recent report (4) states that 5 to 7 per cent of an older population of women could see clearly both at far and near range without such aid, but this was true for only 2 to 4 per cent of the men. The great majority cannot compensate successfully for the normal loss of accommodation associated with aging.

Examination program

The population which was examined for this study cannot be assumed to be a representative older group since it included only those who had recently been admitted to a hospital for the care of the mentally ill. However it should be noted that, increasingly, attention has been directed (5–7) to the possibility that mental illness, even among the aged, may be functional rather than chiefly organic. There is in this study no ground for concluding that the lack of adequate visual care may have contributed in any way to the breakdown of adequate functioning which admission to a mental hospital implies, but one may perhaps speculate that the fears and inefficient responses associated with a decline in visual efficiency may have contributed to the lack of tolerance to stress which admission to a mental hospital suggests.

Examination of the first patients from the experimental group was begun in March 1962. Patients from the control group and those from the experimental group who had not yet been seen were examined between July 7 and August 18. All examinations were conducted in the experimental ward. Test conditions were never ideal. Equipment consisted of an ophthalmoscope, a retinoscope, a phoroptor, a projected test chart and screen, and a pseudoisochromatic color chart.

The color test was used first because it was anticipated that most patients could name the numbers shown and that early successful responses might encourage better cooperation in subsequent tests. Preceding questions were also designed to elicit helpful responses: "Have your eyes always been pretty good?" "Have you ever worn glasses?" "How old were you when you first began to wear glasses?" "Do you have them now?" Responses indicated that the patients usually interpreted these questions to mean, "When have you been examined for glasses?" They often answered in terms of the circumstances of their earliest examination or by stating that they never had been tested, sometimes adding that they bought some "store" glasses when they needed them. This was taken to mean that their first glasses were acquired when they had noted presbyopic symptoms, that is, an inability to see clearly enough for comfortable close work.

Ophthalmoscopic and retinoscopic examinations were followed by a determination of uncorrected distance acuity of each eye and then by an estimate of the refractive correction yielding the best acuity for distance. The term "estimate" is used in recognition of the fact that many patients seemed unable to make finer distinctions in discrimination and also because the test distance was always some-

what less than 20 feet, varying from 11 to about 14 feet as different testing rooms were provided. This was allowed for in prescribing on the basis of the indicated corrections, just as the size of the test letters was adapted for the test distance. An addition of +2.25 diopters for near vision enabled each patient to see how well he could function for close work with the indicated correction. Precise measures of near acuity were not attempted since some patients were illiterate and others did not readily read English. "Clear, very clear," or "Black; clear," or "Good," were among the responses recorded. A determination of distance acuity with present glasses, if worn for distance, completed the examination. It was noted that present corrections often required better adjustment if best results were to be attained.

Patients

All available patients were seen. This did not include all in the total research group because some, and more among the control group, were lost through discharge or other absences at the time the examination was scheduled. When feasible, these were checked on later occasions.

One hundred and fifty-four patients were examined (Table 1), including a few who were unable or unwilling to cooperate. In some, data were incomplete, and therefore were noted as not recorded. These were eliminated in final tabulation, with consequent slight variation in the numbers reported. Seventy-four of the 154 were men; 80 were women. All were mentally ill. No highly significant differences in distribution between the experimental and control groups nor between sexes were noted with any measurement, but a difference between sexes at the 5 per cent level was noted in respect to the history of visual care.

RESULTS

History of visual care

Responses to the first questions indicated that many of these patients (all of presbyopic age) had never had glasses, or had never worn glasses prescribed for

TABLE 1

Examined Population Distributed by Age According to Experimental and Control Groups and Between Sexes

	Age (yrs.)			Totals
	55–64	65–74	75+ and older*	
Experimental group				
Men	18	19	8	45
Women	13	21	12	46
Control group				
Men	9	11	9	29
Women	11	14	9	34
Totals	51	65	38	154

χ^2 (experimental and control groups) = 0.92. Not significant.

χ^2 (sex distribution) = 0.77. Not significant.

* Included are 4 patients aged 86–88; the 2 in the experimental group were women; of the 2 in the control group, 1 was a man and 1 was a woman.

them, or were now without glasses or were wearing glasses which they considered no longer satisfactory.

Data on these points, recorded for 141 patients, showed that:

25 had never worn glasses.
6 had worn unprescribed corrective glasses for near vision.
78 began to wear corrective glasses when acuity of near vision declined.
19 first wore corrective glasses in youth—6 because of myopia, 12 because of hyperopia or astigmatism, and 1 following operation for juvenile cataracts at the age of 12.
13 first wore glasses as young adults, usually to help them work more comfortably.

Thus it appeared that most of these patients had adequate attention for any visual difficulties which were noted, but that 31 of them had never enjoyed the attention considered desirable to assure recognition of a pathologic condition or to provide optimal correction of the normal difficulties encountered as eyes age.

With respect to the history of eye care, there were no significant differences between the various age groups (by decade) or between the experimental and the control group. A difference, significant at the 5 per cent level, was noted between the sexes. Fewer women had a history of no visual examination, and a larger proportion had sought and received visual correction at an earlier age.

Although a history of corrective glasses for observed visual difficulties is not synonymous with evidence of adequate visual examination, the data suggest that these patients were probably not especially neglected in respect to their visual needs. This conclusion is supported by a study (1) of the general health status in the older population of Wolverhampton made just before the introduction of socialized medicine in Britain. Sheldon (1) found that 2.9 per cent of the patients in his sample, aged 65–80+, did not possess needed spectacles, and 17.3 per cent of those who were wearing glasses had never had their eyes tested. This is similar to the 22 per cent (31 of 141) reported here who had never had glasses prescribed but were sometimes wearing them.

Visual status at time of this study

Results of ophthalmoscopic examinations reported at various times—as part of general medical examinations and for this study—were in general agreement. However, only the gross pathologic findings were recorded. Degenerative changes, so frequently observed among older patients (2, 8), were not easily discernible under the conditions of examination. When visual acuity is of a low order but no gross pathologic lesion is evident, it is reasonable to conclude that degenerative changes may be the cause.

The "evident deficiencies" (Table 2) observed in the 308 eyes of the 154 patients were as follows:

47 eyes contained a cataract.
6 were aphakic after cataract surgery.
4 were glaucomatous.
40 showed other pathologic or functional limitations ranging from minor to severe.

Table 2 shows the distribution by age groups for patients whose eyes were evidently defective, in contrast to those whose eyes were without gross pathologic

TABLE 2

Ophthalmologic Findings in the 308 Eyes of the 154 Patients—Distribution According to Age

Eyes	Age of Patients (yrs.)			Total Eyes
	55–64	65–74	75+	
Essentially normal	87	90	34	211
Evident deficiencies	15	40	42	97
Totals	102	130	76	308

$\chi^2 = 44.04$; $P < 0.02$.

defects. There was a significant difference between the three age groups (55–64, 65–74 and 75+ years). This might have been anticipated. The frequency and severity of visual difficulties tend to increase with age and those acquired through the years are included with those of more recent appearance. Cataractous changes, especially, are common in aging eyes, so that the designation "cataract" usually indicates only a stage in a developing process. In this study, cataractous changes, unless specifically noted in the reported examination records, were interpreted as essentially normal developments unless they had become so dense that they prevented achievement of 20/40 vision with the best correction. This is in fair agreement with an old clinical rule which advises against surgery until at least that degree of interference is demonstrated. Sometimes the rule is read in this fashion: no surgery until the acuity of the better eye is reduced to less than 20/40.

The classification of "evident deficiencies" (Table 2) usually involved both eyes of each patient. Only 2 patients were known to have glaucoma, although 4 eyes were involved; the patient who was blind had lost both eyes from glaucoma; the other patient with glaucoma was blind in one eye but had retained good vision in the other. Incidentally, the inclusion of 1 blind patient in this group is consistent with Sheldon's (1) listing of 5 blind subjects in his representative geriatric population; of the 5 cases, 2 were from cataracts, 1 from opacities dating back to childhood, and 2 from undetermined causes. The incidence of blindness was about 1 per cent in Sheldon's cases, and also in ours. Some patients in this group suffered from diabetes and noted some loss of vision with a tendency toward variation in the condition of their eyes from day to day; in these cases both eyes were included under the 40 with "miscellaneous" deficiencies. Two amblyopic eyes and 2 that had been lost in accidents represented 4 different patients.

All 154 patients were included in the data on ophthalmologic findings, but a few patients cooperated too poorly to permit measurements of visual acuity (Table 3), so these measurements were carried out on 147 subjects. Records of uncorrected acuity for distance were obtained for 294 eyes. In a few more than one-third, the distance-vision acuity was 20/40 or better without correction; in nearly two-thirds it was less than 20/40. Chi-square analysis showed that the difference between age groups was highly significant by the usual convention ($P < 0.01$). However, this significant value may be attributable to the dis-

TABLE 3

Uncorrected Distance-Vision Acuity in 294 Eyes of 147 Patients—Distribution According to Age

Distance-Vision Acuity	Age of Patients (yrs.)			Total Eyes
	55–64	65–74	75+	
Less than 20/40	49	87	49	185
20/40 or better	49	39	21	109
Totals	98	126	70	294

$\chi^2 = 16.16$; $P < 0.01$.

proportionately high number (about 50 per cent) in the younger group who had 20/40 vision or better without correction.

Adoption of 20/40 as the dividing line in these distributions was suggested by the fact that vision of 20/40 or better is commonly accepted as adequate in many situations where proof of satisfactory vision is required (*e.g.*, testing for drivers' licenses). In this group only 57 eyes showed acuity of less than 20/200 for distance, uncorrected. This included those blind from glaucoma or other causes, as well as those classifiable as "industrially blind" without correction. Some in the latter category would be classified differently when correction was introduced.

For many purposes it is less important to know about eyes than to know about patients. One good eye often functions as effectively as two in many situations. Moreover, a patient who has only one good eye, upon which he depends almost exclusively, is spared the need for controlling the responses of two eyes so that they work as a single efficient unit. No effort was made in these tests to determine the stress occasioned by the need for maintaining binocularity, but relevant spontaneous comments were recorded.

The acuity of the better eye was accepted as a measure of visual status. This yielded data on distance vision under current working conditions for 148 of the 154 patients who were examined. The groups were separated according to age and according to whether the present functioning acuity (with glasses, if worn for distance) was less than 20/40, or was 20/40 or better (Table 4). Significant differences between the three age groups were again revealed—significant at the 2 per cent level. This suggests, by comparison with Table 3, that dependence on the better eye and the use of glasses by some who obviously needed them are factors which tend to mitigate the relative disadvantages indicated for the older age groups when the acuity for both eyes (uncorrected) is the basis for estimating age differences. As shown in Table 4, the youngest group (age 55–64) was superior since more than three-fourths of the eyes were functioning at an acuity of 20/40 or better; two-thirds of the 65–74 year group achieved that level; but not quite half of those in the 75+ group had such good vision.

MEASURES FOR POSSIBLE IMPROVEMENT

Determination of refractive corrections designed to yield maximal acuity for distance indicates that most of such patients would benefit by plus lenses to

TABLE 4

Visual Status According to Age Groups When the Measure Represented Acuity of the Better Eye (148 Patients)

Visual Acuity	Age of Patients (yrs.)			Totals
	55–64	65–74	75+	
Less than 20/40	11	22	19	52
20/40 or better	38	42	16	96
Totals	49	64	35	148

$\chi^2 = 9.09$; $P < 0.02$.

correct the farsightedness which so frequently appears to increase with age in normally healthy eyes. Cataractous changes reduce this direction of change, frequently resulting in a shift toward requirement of minus lenses for clear distance vision in patients who may have been farsighted at a previous time. Although corrections required for best vision may not change frequently in the later years if visual media remain clear, changes accompanying the development of cataract may require more frequent modifications if maximal acuity is to be maintained.

Objective determinations were made of the possibility of attaining significant improvement in distance-vision acuity with the introduction of corrective glasses. In Table 5 the patients are again grouped according to the 20/40 dividing line for distance-vision acuity in the better eye; also shown are the changes made possible by the use of corrective glasses as determined by refractive examination.

The measure of improvement indicated in Table 5 is perhaps less striking than the gain indicated in Table 6. Here any marked improvement was reported regardless of the final level of acuity achieved. Some differences between age groups were indicated but they did not reach the 5 per cent level of significance.

People vary in respect to sensitivity; some who need visual correction may reject the very idea of glasses, whereas others needing similar correction may become quite dependent upon the use of glasses. Unfortunately, statistical indications do not reveal the effect of such individual factors upon the clinical findings.

Among the hospital patients, some expressed a need for the accustomed correction whereas others, for whom the apparent advantage would be at least as great, showed no interest, sometimes asserting that there was no need for correction or for better vision in the hospital situation. "It is just a place to eat and sleep," one remarked. Could it perhaps be said that such attitudes indicate an exaggeration of tendencies to "disengagement" (9)? Changing such attitudes was one of the experimental goals of the present study. Data concerning the amount of visual correction required by the patients yielded certain clues to the extent of the needs, if optimal visual performance was to be regarded as essential in encouraging maximal participation in the opportunities presented patients such as those in this experimental group.

Some patients in this group were atypical in respect to visual requirements. Two who could benefit from new corrective measures had uncorrected aphakia.

TABLE 5

Potential for Distance-Vision Acuity as Judged by Present Acuity of the Better Eye Versus Acuity with Correction

Distance-Vision Acuity	Present	Potential
Less than 20/40	51 (35%)	17 (12%)
20/40 or better	94 (65%)	128 (88%)
Totals	145 (100%)	145 (100%)

TABLE 6

Numbers in Each Age Group Who Failed to Improve or Showed Potential Improvement with Indicated Corrections as Determined by Grouped Acuity Ratings for the Better Eye

	Age of Patients (yrs.)			Totals
	55–64	65–74	75+	
No significant gain	23	31	23	77
Potential gain indicated	26	31	11	68
Totals	49	62	34	145

$\chi^2 = 3.81$. Not significant.

One, who reported that his glasses were no longer suitable, required minus 11.00 diopters to achieve maximal distance acuity—indicating a much higher degree of myopia than is usually associated with refractive changes induced by cataract. Three patients had mixed astigmatism, requiring a combination of plus and minus correction for each eye. One patient whose two eyes were equally good by corrected acuity rating, required a plus correction for one eye and a minus correction of equal strength for the other eye. These last-named 4 patients were omitted from the tabulation of corrections required (Table 7).

Table 7 contains a somewhat unusual grouping. The rationale for this choice was that persons in whom refractive errors for distance are relatively minor, whether associated with nearsightedness or farsightedness, are less likely to recognize their own visual deficiencies and can often compensate for them fairly effectively. They may even reject correction for distance unless they have already learned to appreciate the advantages of such correction (usually as incorporated in bifocal glasses). A range of less than 1 diopter of correction is likely to include most such persons. In geriatric groups, as might be anticipated, most of the patients with distance errors of this minimal magnitude do recognize and appreciate the greater advantages associated with correction for near vision even when they reject correction for distance.

Presbyopic myopes who require 1 diopter or more of minus correction to achieve clear vision for distance may be able to see near objects clearly without glasses. If bifocals are worn, the correction for near vision may range from a slight plus, through zero to a minus correction that is considerably less than the minus correction required for clear distance vision. Thus the first group in Table

TABLE 7

Age Distribution of Patients Requiring Corrections for Distance as Classified by Indicated Needs for Correction for Both Distance and Near Vision

Correction for Distance Vision*	Need for Correction of Near Vision	Age Groups (number of patients)			
		55–64	65–74	75+	Totals
Minus 1.00 diopter or more	Not always required	3	4	5	12
Less than 1.00 diopter	Always advantageous	19	22	9	50
Plus 1.00 diopter or more	Imperative for efficiency	22	33	20	75
	Totals	44	59	34	137

$\chi^2 = 3.55$. Not significant.

* The minus correction is for nearsightedness (myopia); the plus correction, for farsightedness (hyperopia). Patients requiring no correction for clear distance vision (emmetropia) are included with the middle group who may reject minor corrections for either myopia or hyperopia. The measure of the amount of error denotes the plus or minus correction which affords best acuity or, in the case of astigmatism (excepting mixed astigmatism), by calculating the spherical equivalent of the best refractive correction.

7 includes those who might, as well as those who might not, gain significant advantage from correction for near vision, depending upon the magnitude of the distance error, their habits in respect to wearing glasses, and their requirement for clear vision at a particular working distance.

Hyperopes who require a plus correction for clear distance vision always require a stronger plus correction for clear near vision. Even those who may see well at a distance without correction may gain great advantage from a correction for near vision. Another group includes those who might be expected to appreciate correction for distance and who, without correction for near vision, are seriously handicapped for near-vision tasks which require critical use of the eyes.

As shown in Table 7, 125 of the 137 patients tested could be expected to gain greater speed, efficiency, and comfort in performing near-vision tasks of any kind (washing dishes, bench work, reading) when provided with corrective glasses. Those who most needed such corrective glasses were frequently wearing them, or at least owned them at some time. Some of the patients in the later presbyopic years, and others since losing their glasses, had not enjoyed the advantage of good vision for near objects, with all that it implies in capacity for satisfactory achievement.

PATIENTS' ATTITUDES TOWARD NEED FOR CORRECTION

What was the attitude of these patients toward their own visual limitations? Marked individual differences were apparent. Some who were wearing corrective glasses noted that it was time for a new examination. Others, usually those who had never worn glasses, stated firmly that their eyes were all right; these included the few who refused to cooperate for examination. Some indicated amazement when they realized what the near-vision correction did for them. One who was mentally confused, when given glasses for near vision immediately began to

read correctly with ease. A myopic patient, upon receiving glasses for distance vision, substituted correct responses for the "men's faces" that she had been describing on the test chart.

An estimate of the proportion of patients who would appreciate the advantage provided by corrective glasses is indicated in Table 8. Included in the table is the examiner's opinion concerning the need for glasses. Judgment was based chiefly on an assumption that a correction of less than 1 diopter for distance would seldom be appreciated whereas the need for a stronger correction would usually be recognized as advantageous and would be accepted. Occasionally other factors had to be taken into account, *e.g.*, the extent to which individual patients had learned to compensate for visual deficiencies.

For both distance and near vision, the patients' and the examiner's opinions regarding the need for correction were in agreement in approximately two-thirds of the cases. The other third comprised 1) patients who were presently satisfied although examination indicated a need for correction, and 2) those who desired correction although the examiner saw little advantage to be gained. Attitudes regarding correction for near vision differed markedly between those who were currently using glasses and those who had never worn glasses or had discarded or mislaid them (Table 9). Twenty-eight of the 69 patients the examiner considered in need of better correction for near vision were wearing no glasses at the time of examination but expressed satisfaction with their present status. Were they rejecting the responsibility for seeing more clearly and thus cherishing their disabilities? Later it will be possible to state whether this attitude is related to observed responses in other aspects of the research program as reported by other investigators.

Of the 18 who expressed a desire for better correction although the examiner judged that no change was needed, 13 were wearing glasses with multifocal corrections. That there would be no significant gain in acuity cannot be taken as conclusive evidence that their desire for improvement was entirely unrealistic; perhaps there is more anxiety or desire for attention in this group. Data on this point may be available later.

TABLE 8

Patients' and Examiner's Views Concerning Desirability of Correction

(Patient's view is stated as correction "desired" or "not desired"; examiner's view as correction "needed" or not "needed")

Views Concerning Correction		For Distance Vision	For Near Vision
Patient and examiner agree	Not desired; not needed.	75 (52%)	56 (39%)
	Desired; needed.	19 (13%)	40 (28%)
Patient and examiner differ	Desired; not needed.	23 (16%)	18 (13%)
	Not desired; needed.	26 (18%)	29 (20%)
	Totals	143 (99%)	143 (100%)

TABLE 9

Patients' Attitudes Concerning Desirability of Correction for Near Vision, in Relation to Need (as Judged by Examiner) and to History of Visual Care

Past and Present Visual Care	Correction Not Desired		Correction Desired		Totals
	Not needed	Needed	Not needed	Needed	
No correction at any time	1	16	0	7	24
No correction now	4	12	5	25	46
Corrective glasses worn now	51	1	13	8	73
Totals	56	29	18	40	143

$\chi^2 = 97.55$; $P < 0.01$. Two cells in the first row have expected values of less than 5, but their contribution to the total of χ^2 is relatively small. The excess over the critical value of 16.81 justifies the conclusion that this distribution is highly unlikely to have resulted from chance.

INDIVIDUAL VARIATIONS

Some patients had sustained a gradual loss of visual acuity. For some this obviously was a source of insecurity and fear. Others had arrived at the point of recognition and acceptance of their visual loss. A few noted that their visual acuity varied. Diabetics especially seemed to be aware of such variation, and some patients who were apparently in a state of deterioration had noted similar changes. Others apparently were sensitive to chemotherapy, since the change in balance between the sympathetic and parasympathetic impulses may affect pupil size and other visual functions.

Many legitimate reasons for concern about the eyes are to be found in any group of geriatric patients, and this research group of mentally ill patients can be considered to have suffered special strains and stresses. Ignorance about normal changes in aging eyes was the basis for one woman's worry about her vision. She said that she had worn glasses at a younger age but had discarded them. Shortly before admission to the hospital, she noted that her vision had failed. Therefore she looked up the glasses and began to wear them again—but they no longer helped. At the receiving hospital she was examined again, was assured that her eyes only needed correction, and was given appropriate glasses. Her expressions of appreciation made it clear that this first therapeutic measure—this adjustment of her eyes to normal visual capability—had taken a great weight off her mind. Apparently she had been struggling with a fear of blindness and a vain endeavor to conceal an increasing disability which she did not recognize as a normal change.

In other patients of this group, however, pathologic lesions were present which were not susceptible to correction. In a few cases extreme visual loss was associated with cataracts. One patient who had a dense cataract in one eye had undergone cataract extraction from the other eye but apparently never had been provided with the strong corrective glasses needed to enable him to see with that eye. Another subject, whose visual defect was less extreme, reported that the desirability of surgery had been discussed with him before admission. One

patient in her 70's, whose juvenile cataracts had been extracted at the age of 12, was distressed because she now had only one pair of corrective glasses. She stated that the fear of breaking or losing her glasses seemed to pose a constant threat because she knew that she would be helpless without them. Such concerns, well justified in some cases but apparently exaggerated in others, indicate problems that some of this group could cope with more effectively in happier circumstances. Certain patients, especially those in whom pathologic changes have induced loss of central acuity, have no realistic hope for improvement. What part, if any, did this play in the development of their mental illnesses? And what is the implication of such irreversible changes for any rehabilitation program which does not provide for special consideration of their particular complex of difficulties? It may be pointed out that many older people have suffered similar visual losses without mental breakdown, but does this mean that such a loss may never be a significantly contributing factor?

These questions can only be asked, not answered, at this time. But they may remind us that group activities among aged patients demand increasing recognition of individual differences. Throughout a lifetime these people have been developing their own complexes of strengths and weaknesses, and their own patterns of response to opportunities and difficulties. The data of this study suggest that visual efficiency is a matter of great concern to some persons, but to others perhaps it is only a matter of unwanted responsibility.

COMMENT

Funds to provide needed corrective glasses were not included in the closely calculated budget for this project and supplementary funds have only now been promised. Until the factor of inadequate vision can be eliminated, it will be impossible to estimate how much this factor contributes to lack of response or failure of achievement in these patients. Availability of corrective glasses may encourage consideration in some cases of the advantages of surgical extraction of dense cataracts. The results of changes in visual status made possible by provision of needed corrective lenses will be presented later in the report of behavioral studies which constitute a major aspect of this total research program.

SUMMARY

A study of the visual capacities of older persons was undertaken in 154 patients (74 men and 80 women) in a hospital for the mentally ill. The patients were grouped according to ages 55–64, 65–74, and 75+ years.

With respect to previous visual care, most of the patients had received adequate treatment for any observed visual difficulties, but 31 had never been examined for the purpose of refractive correction. No significant differences were found between the three age-groups, but the women had enjoyed better visual care than the men.

Visual acuity of 20/40 or better was found in more than three-fourths of the patients in the 55–64 year group, in about two-thirds of those in the 65–74 year group, and in not quite half of those in the 75+ group.

The data indicated that new corrective glasses would improve distance vision for 31 per cent, and near vision for 48 per cent of these patients, but some of those who would benefit did not desire correction.

Analysis of the attitudes of the patients showed that improvement in visual efficiency was a matter of great concern to some of them, but perhaps a matter of unwanted responsibility to others.

REFERENCES

1. SHELDON, J. H.: The Social Medicine of Old Age. London, Oxford University Press, 1948.
2. WEISS, A. D.: Sensory functions, *in* J. E. Birren (ed.), Handbook of Aging and the Individual. Chicago, University of Chicago Press, 1959.
3. HIRSCH, M. J., AND WICK, R. E.: Vision of the Aging Patient. Philadelphia, Chilton Co., 1960.
4. ZONNEVELD, R. J. VAN: Medical and social sample survey of the aged in the Netherlands, *in* Old Age in the Modern World. Edinburgh, E. and S. Livingstone, Ltd., 1955.
5. World Health Organization: Mental Health Problems of Aging and the Aged. Geneva, World Health Organization, 1959.
6. KAY, D. W. K., AND ROTH, M.: Schizophrenias of old age, *in* R. H. Williams, C. Tibbitts, Wilma Donahue (eds.), Processes of Aging: Social and Psychological Perspectives, Vol. I. New York, Atherton Press, 1963.
7. STRÖMGREN, E.: Epidemiology of psychiatric disorders of the aged, *in* R. H. Williams, C. Tibbitts, Wilma Donahue (eds.), Processes of Aging: Social and Psychological Perspective, Vol. II. New York, Atherton Press, 1963.
8. DUKE-ELDER, SIR W. S.: Textbook of Ophthalmology, Vol. IV. St. Louis, C. V. Mosby Co., 1949.
9. COMMING, E., AND HENRY, W. E.: Growing Old. New York, Basic Books, Inc., 1961.